

1. An exposure apparatus that exposes a substrate held by a substrate holder on a substrate stage, said exposure apparatus comprising:

an open-close mechanism that opens and closes said lid member in a manner that the inside of said holder container mounted on said container-mount is isolated from the outside; and

2. The exposure apparatus according to claim 1, wherein said holder container can contain a plurality of substrate holders at the same time.

4. The exposure apparatus according to claim 2,  
wherein said holder transport system performs

sequentially transport of one of said substrate holders from said substrate stage into said holder container and transport of another of said substrate holders from said holder container onto said substrate stage.

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5. The exposure apparatus according to claim 1, wherein said holder transport system also serves as at least part of a transport system for said substrate.

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6. The exposure apparatus according to claim 1, wherein said holder container comprises: a container main body on which supporting members are provided which support part of the periphery of a face opposite to a face, of said substrate holder, to contact a substrate; a lid member that is detachable from said container main body and isolates the inside space from the outside; holding members that are provided on said lid member and each hold part of said face, of said substrate holder, to contact said substrate, which part is different from part to contact the substrate; and a lock mechanism that fixes said lid member to said container main body and can be released, and

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wherein said holder transport system includes a transport arm that transports said substrate holder into and from said holder container when said lid member is opened.

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7. The exposure apparatus according to claim 1,

wherein said holder transport system performs said transporting of a substrate holder each time exposure of a predetermined number of substrates is completed.

5           8. The exposure apparatus according to claim 1, wherein after having unloaded the substrate holder from said substrate stage, said holder transport system loads said substrate holder, which has been cleaned after the unloading, onto said substrate stage again.

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9. A device-manufacturing method including a lithography process, wherein in said lithography process, exposure is performed using the exposure apparatus according to claim 1.

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10. An exposure apparatus that transfers a pattern onto a substrate by illuminating a mask having said pattern formed thereon with illumination light, said exposure apparatus comprising:

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a stage that has a set-position from which a detection unit capable of detecting said illumination light is detachable and that is movable holding said substrate; and

a transport system that transports said detection unit to said set-position of said stage.

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11. The exposure apparatus according to claim 10, wherein said detection unit detachable from said set-

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position on said stage comprises a sending portion that sends a radio signal according to illumination light detected; and a power supply portion that supplies power to said sending portion for driving it.

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12. The exposure apparatus according to claim 11, further comprising:

a substrate holder that has a predetermined shape and is provided in a specific position on said stage and  
10 holds said substrate;

wherein said detection unit has the same shape as said substrate holder.

13. The exposure apparatus according to claim 12,  
15 wherein said transport system transports said detection unit to said set-position on said stage and said substrate holder holding a substrate to said specific position on said stage.

20 14. The exposure apparatus according to claim 11, further comprising:

a sensor that detects said illumination light; and  
a control system that controls said illumination  
light according to detection results of said sensor;

25 wherein said sensor is adjusted using said detection unit, which is provided in said set-position on said stage and which is detachable.

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5           a container that has an inside space where one or  
more holders can be contained and a lid member that  
isolates said inside space from the outside;

an open-close mechanism that opens and closes said  
lid member of said container; and

10           a holder transport system that transports a holder  
between said container and said clean space when said  
open-close mechanism has opened said lid member.

16. The transport system according to claim 15,  
15 wherein said holder transport system transports a holder  
out of said clean space, and transports said holder,  
which has been cleaned after the transporting-out, into  
said clean space.

17. The transport system according to claim 15,  
wherein said holder transport system performs  
sequentially transport of one of said holders from said  
clean space into the inside of said container and  
transport of another of said holders from the inside of  
said container into said clean space.

18. The transport system according to claim 15,  
wherein said holder transport system comprises a loading

unit that transports a holder from the inside of said container into said clean space; and a unloading unit that transports a holder from said clean space into the inside of said container and that is different from said loading unit, and

wherein loading of a holder by said loading unit and unloading of another holder by said unloading unit are performed partially in parallel.

10 19. The transport system according to claim 15, further comprising:

a container transport system that transports said container containing at least one holder.

15 20. The transport system according to claim 19, wherein said container transport system includes any one of a floor-moving-type vehicle and a ceiling-moving-type vehicle.

20 21. The transport system according to claim 15, wherein the atmosphere of the inside of said container is substantially the same as that of said clean space.

25 22. The transport system according to claim 21, wherein after having carried a holder into said clean space, said holder transport system transports an object that is to be held by said holder to said clean space.

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23. An exposure system comprising an exposure apparatus that transfers a pattern formed on a mask onto a photo-sensitive substrate, said exposure system wherein a substrate holder to hold said photo-sensitive substrate is transported to a predetermined position of said exposure apparatus by said transport system of claim 15.

24. An exposure system comprising an exposure apparatus that transfers a pattern formed on a mask onto a photo-sensitive substrate, said exposure system wherein a holder in which a reference illuminance meter is embedded is transported to a predetermined position of said exposure apparatus by said transport system of claim 15.

25. The exposure system according to claim 24, wherein said reference illuminance meter has a radio-type transmitter that transmits detection results of exposure illumination light to a control system.

26. A holder container that contains a substrate holder that can hold a substrate, said holder container comprising:

at least one supporting member that supports at least one substrate holder; and

a lid member that isolates the inside space, where said at least one supporting member is provided, from the

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outside;

wherein said at least one substrate holder is contained in said inside space isolated from the outside by said lid member.

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27. The holder container according to claim 26, wherein a plurality of shelves that can hold a plurality of substrate holders are provided for said at least one supporting member.

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28. The holder container according to claim 26, wherein said at least one supporting member supports each said at least one substrate holder by touching other part of said substrate holder than part that contacts said substrate when said substrate holder holds said substrate.

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29. The holder container according to claim 26, wherein said at least one supporting member supports each said at least one substrate holder in part thereof so as not to interfere with an unloading arm that unloads said at least one substrate holder from said inside space.

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30. The holder container according to claim 26, wherein a gap is provided between said at least one supporting member and said lid member.

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31. The holder container according to claim 26, wherein said at least one supporting member and said lid



member are made of anti-static material.

32. The holder container according to claim 31, further comprising:

5       at least one holding member that is provided on said lid member and holds part of said face, of said substrate holder, to contact said substrate, and

          wherein said at least one holding member is at least partially made of elastic material.

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33. The holder container according to claim 26, wherein said at least one supporting member is provided in the main body of said holder container, which can engage with said lid member, said holder container

15 further comprising:

          a lock mechanism that fixes said lid member to said container main body and can be released.

34. A device-manufacturing unit that has a holder,  
20 to hold an object, arranged in a space of which cleanliness is higher than that of the outside, said device-manufacturing unit comprising:

          an open-close mechanism that communicates the inside of a container containing said holder in a sealed  
25 manner to said space while isolating the inside of said container from said outside; and

          a transport system that transports said holder between said container and said space.

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35. The device-manufacturing unit according to claim 34, wherein the concentration of impurities inside said container is set at a level not higher than that of  
5 said space.

36. The device-manufacturing unit according to claim 34, wherein the atmosphere inside said container is set to be substantially the same as that of said space.  
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37. The device-manufacturing unit according to claim 36, wherein said container is filled with gas having substantially the same characteristics as that of said space.  
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38. The device-manufacturing unit according to claim 34, wherein said holder holds a sensitive object, and wherein an exposure main body that exposes said sensitive object to an energy beam is arranged in said  
20 space.

39. The device-manufacturing unit according to claim 38, wherein chemically clean gas having high transmittance to said energy beam is supplied to said  
25 space.

40. An adjustment method with which to adjust a device-manufacturing unit that has a holder, to hold an

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object, arranged in a space thereof having a higher cleanliness than that of the outside of said device-manufacturing unit, said adjustment method wherein the inside of a container to contain a holder in a sealed  
 5 manner is communicated to said space in a manner that the inside of said container is isolated from said outside, and wherein a holder is transported from said space into said container, and a clean holder is transported into said space.

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41. A detection unit that can be used in an exposure apparatus that transfers a pattern formed on a mask onto a substrate by illuminating said mask with illumination light, said detection unit comprising:

15 a detecting portion that can detect illumination light; and

a power supply portion that supplies power to said detecting portion for driving it, and

20 which is transported by a transport system of said exposure apparatus in order to be set up in a predetermined position inside said exposure apparatus.

42. The detection unit according to claim 41, further comprising:

25 a sending portion that sends a radio signal according to detection results of said detecting portion.

43. The detection unit according to claim 42,

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which: has the same shape as a substrate holder in a predetermined shape, which holds said substrate used in said exposure apparatus.

- 5           44. The detection unit according to claim 41, which: has such a shape that a transport unit, which transports a substrate holder holding said substrate, can transport said detection unit, said substrate being used in said exposure apparatus.

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45. The detection unit according to claim 41, which: detects illuminance of said illumination light.

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